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COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

#1832

FRANKFORT OFFICE PARK
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

September 28, 1987

Ms. Betsy Shaver
Kentucky CERCLA PA/SI Regional Project Officer
U. S. Environmental Protection Agency
345 Courtland Street
Atlanta, Georgia 30365

RE: Preliminary Assessment Report
Richmond Ice Company
Madison County, Kentucky
EPA ID# KYD

Dear Ms. Shaver:

Enclosed is the Preliminary Assessment (PA) Report for the Richmond Ice Company in Madison County, Kentucky. The following conclusions are based on the findings in EPA Form 2070-12 (Appendix A):

1. The Richmond Ice Company is located within the city limits of Richmond. A lake behind the ice plant was filled in with dirt and municipal waste from 1973 until 1978.
2. This site is not a RCRA Treatment, Storage and Disposal (TSD) site and therefore falls under the CERCLA Program. This site was placed on the Uncontrolled Site Section Discovery List in December 1986 due to "questionable fill for the small lake".
3. The preliminary HRS score for an observed release of toluene at the site is 5.96 (Appendix B). No hazardous conditions were found to exist at Richmond Ice Company.

The Kentucky Division of Waste Management (KDWM) is recommending a low priority for this site investigation at the Richmond Ice Company due to one occurrence of suspect fill material.

Sincerely,

Caroline Patrick Haight, Manager
Permit Review Branch

PRELIMINARY ASSESSMENT REPORT

**RICHMOND ICE COMPANY
RICHMOND, MADISON COUNTY, KENTUCKY**

**BY
JON MAYBRIAR
UNCONTROLLED SITE SECTION
DIVISION OF WASTE MANAGEMENT
SEPTEMBER, 1987**

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documentation
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HISTORY OF SITE

The Richmond Ice Company is located at 816 Heath Street in Richmond, Kentucky (Appendix C). The plant commercially manufactures ice for Richmond and surrounding areas. The operation began in 1959 and is currently owned by Marsh Orwtenburger and Marilyn Williams. Prior to 1973, the ice company utilized a lake on their property as a water source for making ice, but in May 1973 switched to a municipal water supply for their ice production. The lake was to be filled in with dirt only and required no solid waste permit. On April 13, 1973, a site investigation by KDWM personnel found a small oil slick on the lake, a slimy substance on the bank, and some municipal garbage around the lake (Appendix D). By May 1978, the lake had been filled and graded. On the August 24, 1987, Preliminary Assessment (PA) site visit, no municipal garbage or industrial waste was observed. The site appeared to be completely reclaimed with adequate cover and vegetation over the site (Appendix E). If industrial waste was taken to this site, toluene would be a typical contaminant and resulted in it being chosen for ranking purposes.

ROUTE OF CONTAMINATION

The site is located on the border of the Inner Bluegrass and the eastern Knobs Region and is approximately three (3) acres in size and relatively level. Soils at the site are the Caleast Series and are the deep well-drained soils that form in residuum from limestone. Due to high fertility and permeability, soils around the site have a high crop production rate.

Rocks in the area are in the Upper Ordovician System and bedrock can be found eight (8) to ten (10) feet beneath the surface in the Ashlock Formation. This formation consist of alternate layers of dolomite, shale, and limestone (USGS-1966).

The aquifer of concern can be found 125 feet beneath the site in the Maysville Group. Wells in this group yield 100 to 500 gallons per day (gpd) in broad valley bottoms and along streams but almost no water to wells on hillsides or ridges (USGS-1960).

POSSIBLE AFFECTED POPULATION AND RESOURCES

Population within a one (1) mile radius of the site is estimated to be 21,907 people. There are an estimated 30,054 residents living within a three (3) mile radius and 30,746 people residing within a four (4) mile radius of the site (Appendix F).

Drinking water for Richmond is supplied by Richmond Water, Gas and Sewage Works. Their water intake is upgradient on the Kentucky River. There are no surface water intakes fifteen (15) mile downgradient of the site. An estimated 217 residents utilize groundwater within a three (3) mile radius of the site (Appendix G).

REFERENCES

Kentucky Department of Economic Development, "Resources for Economic Development Richmond, Kentucky". The Richmond Chamber of Commerce, 1986.

Kentucky Division of Waste Management Files on Richmond Ice Company.

USGS, 1960. Availability of Groundwater in Clark, Estill, Madison and Powell Counties.

USGS, 1967. Geological Map of the Union City Quadrangle, Madison and Clark Counties, Kentucky.

USGS, 1952. Photorevised 1979, Moberly Quadrangle, 7.5 Minute Series Topographic Map.

USGS, 1965. Photorevised 1979, Richmond North Quadrangle, 7.5 Minute series topographic Map.

USGS, 1965. Photorevised 1979, Richmond South Quadrangle, 7.5 Minute Series Topographic Map.

USGS, 1952. Photorevised 1979, Union City Quadrangle, 7.5 Minute Series topographic Map.

A



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
KY New Site

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Richmond Ice Company		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 816 Heath Street			
03 CITY Richmond	04 STATE Ky	05 ZIP CODE 40475	06 COUNTY Madison	07 COUNTY CODE 151	08 CONG DIST 05
09 COORDINATES LATITUDE 37°44'26.2"		LONGITUDE -84°16'03.5"			

10 DIRECTIONS TO SITE (Starting from nearest public road)
OFF BIG HILL AVE. BEHIND RICHMOND ICE PLANT

III. RESPONSIBLE PARTIES

01 OWNER (if known) Marsh Orwtenburger		02 STREET (Business, mailing, residential) 352 High			
03 CITY Richmond	04 STATE KY	05 ZIP CODE 40475	06 TELEPHONE NUMBER 1661 623-6990		
07 OPERATOR (if known and different from owner) Owner Marilyn Williams		08 STREET (Business, mailing, residential) 103 B.b-o-link			
09 CITY Richmond	10 STATE KY	11 ZIP CODE 40475	12 TELEPHONE NUMBER 1661 624-9589		

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: _____ MONTH DAY YEAR ☒ B. UNCONTROLLED WASTE SITE (RCRA 103(a)) DATE RECEIVED: _____ MONTH DAY YEAR ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 08/24/97 MONTH DAY YEAR <input type="checkbox"/> NO		BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): _____			
--	--	--	--	--	--

02 SITE STATUS (Check one) <input type="checkbox"/> A. ACTIVE <input checked="" type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN	03 YEARS OF OPERATION 1973 1978 BEGINNING YEAR ENDING YEAR <input type="checkbox"/> UNKNOWN
--	--

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Oily & Slimy Substances noted on bank of pond
being filled with garbage.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

unknown

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☒ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT Karen Glancy	02 OF (Agency/Organization) KDwm Field office	03 TELEPHONE NUMBER (606) 784-6634
04 PERSON RESPONSIBLE FOR ASSESSMENT Jon Maybrier	05 AGENCY KYNREP KDwm	06 ORGANIZATION Div of Waste Mgt PA/ST CERLA
07 TELEPHONE NUMBER ()		08 DATE 08/21/97 MONTH DAY YEAR



<input type="checkbox"/> A. TOXIC	<input type="checkbox"/> E. SOLUBLE	<input type="checkbox"/> I. HIGHLY VOLATILE
<input type="checkbox"/> B. CORROSIVE	<input type="checkbox"/> F. INFECTIOUS	<input type="checkbox"/> J. EXPLOSIVE
<input type="checkbox"/> C. RADIOACTIVE	<input type="checkbox"/> G. FLAMMABLE	<input type="checkbox"/> K. REACTIVE
<input type="checkbox"/> D. PERSISTENT	<input type="checkbox"/> H. INSTANT	<input type="checkbox"/> L. INCOMPATIBLE
		<input type="checkbox"/> M. NOT APPLICABLE

WPA FORM 2070-12 (7-91)



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE KY 02 SITE NUMBER New Site

B. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION 02 ☒ OBSERVED (DATE: 08-21-87) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 217 04 NARRATIVE DESCRIPTION

217 people reside within a 3 mile radius of site using groundwater for drinking.

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☒ OBSERVED (DATE: 08-23-1973) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 28,795 04 NARRATIVE DESCRIPTION

Estimated pop. for 1987. Population in 1973 was considerably less.

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

unknown

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

none

01 ☒ E. DIRECT CONTACT 02 ☒ OBSERVED (DATE: 08-21-87) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 28,795 04 NARRATIVE DESCRIPTION

Population within a four (4) mile radius of the site.

01 ☐ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 3 1/2 acres 04 NARRATIVE DESCRIPTION

Appr. size of pond that was filled with garbage.

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 301 04 NARRATIVE DESCRIPTION

301 people utilize wells as source of potable water within a 4 mile radius. 217 utilize wells within a three (3) mile radius.

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

none

01 ☒ I. POPULATION EXPOSURE/INJURY 02 ☒ OBSERVED (DATE: 08-21-87) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 28,795 04 NARRATIVE DESCRIPTION

Population within a four (4) mile radius.



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE: KY 02 SITE NUMBER: New Site

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA 02 ☒ OBSERVED (DATE: 08-24-97) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None observed

01 ☐ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

unknown

01 ☐ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES
(Risks runoff, standing liquids/leaking drums) 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

unknown

01 ☐ N. DAMAGE TO OFFSITE PROPERTY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

none observed

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

none observed

01 ☐ P. ILLEGAL UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A pond behind the ice company was filled with garbage beginning in 1973 until 1988.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

unknown

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (See specific references e.g. site files, sample analysis reports)

KYDwm Files

Distance: 715 miles Known ☒ Estimated ☐ Unknown ☐
Population: ☐ Known ☐ Estimated ☐ Unknown ☐
Source: ☐ Known ☐ Estimated ☐ Unknown ☐

REGION IV RCRA/NPL POLICY QUESTIONNAIRE FOR INITIAL SCREENING

Site Name Richmond Ice Company

City Richmond State Ky

Facility I.D. Number New Site

Type of Facility: Generator _____ Transporter _____ TSD _____

I. RCRA APPLICABILITY

	yes	no
Does the facility have RCRA interim status?	_____	<u>/</u>
Does the facility have a final or post-closure permit? If so, date issued _____	_____	<u>/</u>
Is the facility a non-notifier that has been identified by States or EPA?	_____	<u>/</u>
Is the facility a known or possible protective filer?	_____	<u>/</u>
Have RCRA wastes been stored onsite for longer than 90 days since November 19, 1980?	_____	<u>/</u>
Have RCRA wastes been disposed onsite since November 19, 1980?	_____	<u>/</u>

STOP HERE IF ALL ANSWERS TO QUESTIONS IN SECTION I ARE NO

II. FINANCIAL STATUS

	yes	no
Is the facility owned by an entity that has filed for bankruptcy under federal laws (Chapter 7 or 11) or State laws?	_____	_____

If yes, what has it filed under?

Chapter 7 _____ Chapter 11 _____ Other _____

III. ENFORCEMENT

EPA STATUS

yes no

Has the facility lost authorization to operate via
1015, 3005(c) permit denial, 3005(h) permit termination,
3005(d) permit revocation? _____

Has the facilities interim status been terminated via
another mechanism (i.e. administrative termination)? _____

IV. CERCLA STATUS

What CERCLA financed remedial or removal activities have been initiated
at the site? (RI/FS, RD/RA, O&M, forward planning, and removal; does not
include enforcement or PA/SI activities).

V. Enforcement Status

yes no

In general, would you characterize the facility as
demonstrating an unwillingness to undertake corrective
action based on prior State, CERCLA or RCRA actions? _____

If yes, please describe and cite the authorities exercised.

yes no

Is the owner/operator a party to any enforcement action
at the site? _____

If not, why not?

Are any PRPs (including owner/operators) undertaking remedial studies or
action in response to CERCLA enforcement authorities? What is the extent/
type of work that has been completed (RI/FS, etc.) and who (generators,
owner/operator, etc.) is conducting the work?

SITE SCREENING SUMMARY

DRAFT
11-25-86

Site Name: Richmond Ice Company

EPA ID #: New Site

Reviewer Name: Jan Maybrier Date: 08-21-87

I. INITIAL REVIEW: (Check where appropriate)

NPL ☐ RCRA ☐ Fed. Fac. ☐ "Low Priority" Landfill ☐

NFA ☐ reason: _____

II. LEAD: Fund ☐ Enforcement ☒ Unknown ☐

III. REMOVAL: Needed ☐ reason: _____

Completed ☐ (score using preremoval conditions)

IV. HRS SCORE: 18.5 observe release Confidence: high ☐ medium ☐ low ☒
4.44 No observe Release

V. LOCATION: Latitude: 37°44'26".2 Longitude: 81°16'03.5"

V. INFORMATION NEEDED: (Check information needed to determine disposition)

A. Preliminary Assessment

(Notes/sources for future reference)

- | | |
|--|--|
| <input type="checkbox"/> 1. RCRA Status Information | _____ |
| <input checked="" type="checkbox"/> 2. Observed Release | <u>Dil slick note near waters edge April 3, 1978</u> |
| <input type="checkbox"/> 3. Target Information | _____ |
| <input checked="" type="checkbox"/> 4. Distance to Surface Water | <u>< 500' to intermittent stream</u> |
| <input checked="" type="checkbox"/> 5. Depth to aquifer of concern | <u>30' to 35'</u> |
| <input checked="" type="checkbox"/> 6. Waste identity | <u>Oil</u> |
| <input checked="" type="checkbox"/> 7. Hazardous waste quantity | <u>unknown</u> |
| <input type="checkbox"/> 8. Others (list) | _____ |

B. Site Investigation

- | | |
|--|-------------|
| <input type="checkbox"/> 1. Waste identity | _____ |
| <input type="checkbox"/> 2. Distance to surface water | _____ |
| <input checked="" type="checkbox"/> 3. Slope/intervening terrain | <u>0-2%</u> |
| <input type="checkbox"/> 4. Containment | _____ |
| <input type="checkbox"/> 5. Observed release (surface) | _____ |
| <input type="checkbox"/> 6. Observed release (ground) | _____ |
| <input type="checkbox"/> 7. Hazardous waste quantity | _____ |
| <input type="checkbox"/> 8. Others (list) | _____ |

SITE DISCOVERY FORM

Part 1: Information necessary to add a site to CERCLIS

ACTION: A

EPA ID: XXXXXXXXXXXX

SITE NAME: Richmond Ice Plant **SOURCE:** (R=EPA, T=STATE)

STREET: Big Hill Avenue and Heath **CONG DIST:** 05 (optional)

CITY: Richmond **ZIP:** 40475 -

CNTY NAME: Madison CNTY CODE: 151 (optional)

LATITUDE: 37° 44' 26" LONGITUDE: 84° 17' 45" (optional)

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N

RPM NAME: _____ **RPM PHONE:** ____ - ____ - ____ (EPA Project Officer)

SITE DESCRIPTION: (optional)

Off Big Hill Avenue behind Richmond Ice Plant

Part 2: Other site information

DATE SITE FIRST

REPORTED: / / REPORTED BY: _____

REASON FOR LISTING:

Questionable fill for small lake-Inspector observed oil slick and oil on banks-

other slimy substances dumped in lake.

B

HRS SCORE SHEETDATE: 8-21-87SITE NAME: Richmond Ice CompanyEPA ID #: New Site REVIEWER: Jon MaybankHRS FACTOR SCORES

	Score	Default	Known	Estimate
1) Toxicity/persistence (TP)	<u>9</u>	none		
2) Waste quantity (WQ)	<u>1</u>	(1)		
3) Containment (Groundwater) (C _{gw})	<u>3</u>	(3)		
4) Depth to aquifer of concern (D _{ac})	<u>4</u>	(6)		
5) Distance to nearest well/population (DP _g)	<u>6</u>	none		
6) Containment (Surface Water) (C _{sw})	<u>3</u>	(3)		
7) Distance to surface water (D _{sw})	<u>3</u>	(6)		
8) Distance to surface intake/population (DP _s)	<u>0</u>	none		

S GROUNDWATER ROUTE SCORING:

$$a) \text{ If observed release: } S_{gw} = \frac{(TP + WQ) (DP_g + 9)}{12.74} \frac{(10)(15)}{12.74} = \underline{11.77}$$

$$b) \text{ If no observed release: } S_{gw} = \frac{(D_{ac} + 7) (TP + WQ) (DP_g + 9) (C_{gw})}{573.3} = \underline{8.63}$$

$$\frac{(11)(10)(15)(3)}{573.3}$$

SURFACE WATER ROUTE SCORING

$$\text{If observed release: } S_{sw} = \frac{(TP + WQ) (DP_s + 9)}{14.3} \frac{(10)(4)}{14.3} = \underline{6.29}$$

$$\text{If no observed release: } S_{sw} = \frac{(D_{sw} + 5) (TP + WQ) (DP_s + 9) (C_{sw})}{643.5} = \underline{3.36}$$

$$\frac{(8)(10)(9)(3)}{643.5}$$

MULTIMEDIA HRS SCORING

Do not score the air route unless an observed release is known to have occurred.

$$S_m = \sqrt{\frac{S_{gw}^2 + S_{sw}^2}{1.73}} = \frac{7.7 \text{ observed release}}{5.4 \text{ no observed release}}$$

The scoring in above steps is based on the following default scores:

- the sum of the scores for net precipitation, permeability, and physical state is 7,
- the groundwater use is for drinking and the score used is 9.
- the sum of the scores for slope/terrain, rainfall and physical state is 5,
- the sum of the scores for surface water use and distance to sensitive environments is 9.

If these assumptions are known to be substantially incorrect, complete an HRS scoring sheet.

Facility Name: Richmond Ice Company

Location: Richmond, Ky. 816 Heath Street

EPA Region: IV

Person(s) in Charge of the Facility: Marsh Orwenterburger
Marlin Williams

Name of Reviewer: J. Maybrier Date: 08-21-87

General Description of the Facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

• A pond behind the Richmond Ice Company was
filled in with garbage beginning in '73 until '78. Oil
was noted on edge of pond on 4 April 3, 1973
site visit. In May 1978 the pond and garbage were
graded and covered with soil.

Scores: $S_M = \frac{7.77}{5.77}$ ($S_{gw} = \frac{9.42}{6.91}$ $S_{sw} = \frac{4.20}{3.36}$ $S_a = \frac{29.49}{0.0}$) observed Release
No Observed
Release

$S_{FE} =$ NOT SCORED

$S_{DC} = 41.67$ observed release

Figure 1

HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 45	1		45	3.1	
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 3	2	4	8		30' to 35'
Net Precipitation	0 1 2 3	1	2	3		47 normal annual - 35 seasonal expansion = 12 inches
Permeability of the Unsaturated Zone	0 1 2 3	1	3	3		liquid oil
Physical State	0 1 2 3	1	3	3		
Total Route Characteristics Score			11	15		
3 Containment	0 1 2 3	1	3	3	3.3	poored directly on the ground
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 15 18	1	9	18		2/1
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1	1	8		< 40 drums
Total Waste Characteristics Score			10	26		
5 Targets					3.5	
Ground Water Use	0 1 2 3	3	6	9		1.1 miles / 4 people
Distance to Nearest Well/Population Served	0 4 8 10 12 16 18 20 24 30 32 35 40	1	6	40		
Total Targets Score			12	49		
6 If line 1 is 45, multiply 1 x 4 x 5			5400			
If line 1 is 0, multiply 2 x 3 x 4 x 5			3960	57,330		
7 Divide line 6 by 57,330 and multiply by 100.			$S_{gw} = \frac{\text{Observed Release}}{\text{No. Observed Release}}$ $S_{gw} = 9.42$			
			$S_{gw} = 6.91$			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

DRAFT

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 45	1		45	4.1	
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .						
2 Route Characteristics					4.2	
Facility Slope and Intervening Terrain	0 <u>1</u> 2 3	1	<u>1</u>	3		<i>< 3 % 2.75' to < 500' to intermediate stream 19. Form</i>
1-yr. 24-hr. Rainfall	0 1 <u>2</u> 3	1	<u>2</u>	3		
Distance to Nearest Surface Water	0 1 2 <u>3</u>	2	<u>6</u>	6		
Physical State	0 1 2 <u>3</u>	1	<u>3</u>	3		
Total Route Characteristics Score			<u>12</u>	15		
3 Containment	0 1 2 <u>3</u>	1	<u>3</u>	3	4.3	oil poured directly on the ground
4 Waste Characteristics					4.4	
Toxicity/Persistence	0 3 6 <u>9</u> 12 15 18	1	<u>9</u>	18		<i>2/1 < 40 drums</i>
Hazardous Waste Quantity	0 <u>1</u> 2 3 4 5 6 7 8	1	<u>1</u>	8		
Total Waste Characteristics Score			<u>10</u>	10	26	
5 Targets					4.5	
Surface Water Use	0 1 <u>2</u> 3	3	<u>6</u>	9		
Distance to a Sensitive Environment	<u>0</u> 1 2 3	2	<u>0</u>	6		
Population Served/Distance to Water Intake Downstream	} <u>0</u> 4 6 8 10 12 16 18 20 24 30 32 35 40	1	<u>0</u>	40		
Total Targets Score			<u>6</u>	6	55	
6 If line 1 is 45, multiply 1 x 4 x 5			<u>2700</u>			
If line 1 is 0, multiply 2 x 3 x 4 x 5			<u>2160</u>		64,350	
7 Divide line 6 by 64,350 and multiply by 100			S _{sw} = 4.20		Observed Release	
			S _{sw} = 3.36		No Observed Release	

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

DRAFT

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0	45	1	45	45	5.1
Date and Location:						
Sampling Protocol:						
If line 1 is 0, the $S_a = 0$. Enter on line 5 . If line 1 is 45, then proceed to line 2 .						
2 Waste Characteristics						5.2
Reactivity and Incompatibility	0	1 2 3	1	3	3	Incompatibility to be 2
Toxicity	0	1 2 3	3	6	9	
Hazardous Waste Quantity	0	1 2 3 4 5 6 7 8	1	1	8	
Total Waste Characteristics Score				10	20	
3 Targets						5.3
Population Within 4-Mile Radius	0	9 12 15 18	1	21	30	
Distance to Sensitive Environment	0	1 2 3	2	0	6	
Land Use	0	1 2 3	1	2	3	
Total Targets Score				23	39	
4 Multiply 1 x 2 x 3				2949	35,100	
5 Divide line 4 by 35,100 and multiply by 100				$S_a = 29.49$		

FIGURE 9
AIR ROUTE WORK SHEET

	Observed Release	No. Observed Releases	Observed Release ²	No. Observed Releases
Groundwater Route Score (S_{gw})	9.42	6.91	88.74	47.75
Surface Water Route Score (S_{sw})	4.20	3.36	17.64	11.28
Air Route Score (S_a)	29.49	0.0	869.64	0.0
$S_{gw}^2 + S_{sw}^2 + S_a^2$	/		976.04	59.03
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$			31.24	7.68
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73$			$S_H = 18.05$	
			$S_M = 4.44$	

106.38

10.31

5.96

Figure 10

WORKSHEET FOR COMPUTING S_H

Direct Contact Work Sheet							
Rating Factor	Assigned Value (Circle One)		Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Incident	0	45	1		45	8.1	
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2							
2 Accessibility	0	1 2 3	1	3	3	8.2	
3 Containment	0	15	1	15	15	8.3	
4 Waste Characteristics Toxicity	0	1 2 3	5	10 10	15	8.4	
5 Targets						8.5	
Population Within a 1-Mile Radius	0	1 2 3 4 5	4	20 20	20		
Distance to a Critical Habitat	0	1 2 3	4	0 0	12		
Total Targets Score				20 20	32		
6 If line 1 is 45, multiply 1 x 4 x 5				9000	21,000		
If line 1 is 0, multiply 2 x 3 x 4 x 5				9000			
7 Divide line 6 by 21,000 and multiply by 100				SDC = 41.67		Observed Incident	
				SDC = 41.67		No Observed Incident	

21,907 people
residing within
a 1 mile radius
of the site.

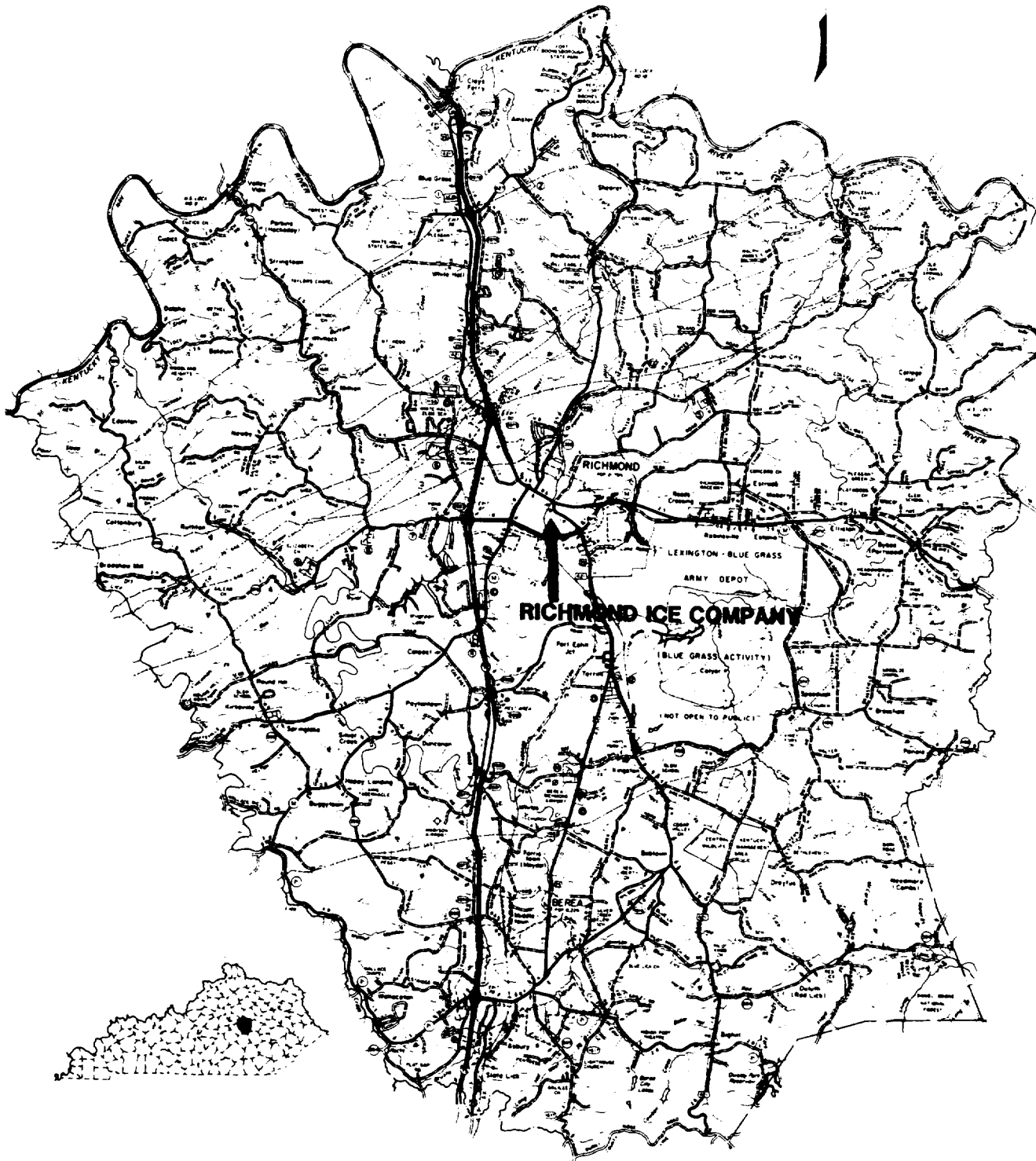
FIGURE 12
DIRECT CONTACT WORK SHEET

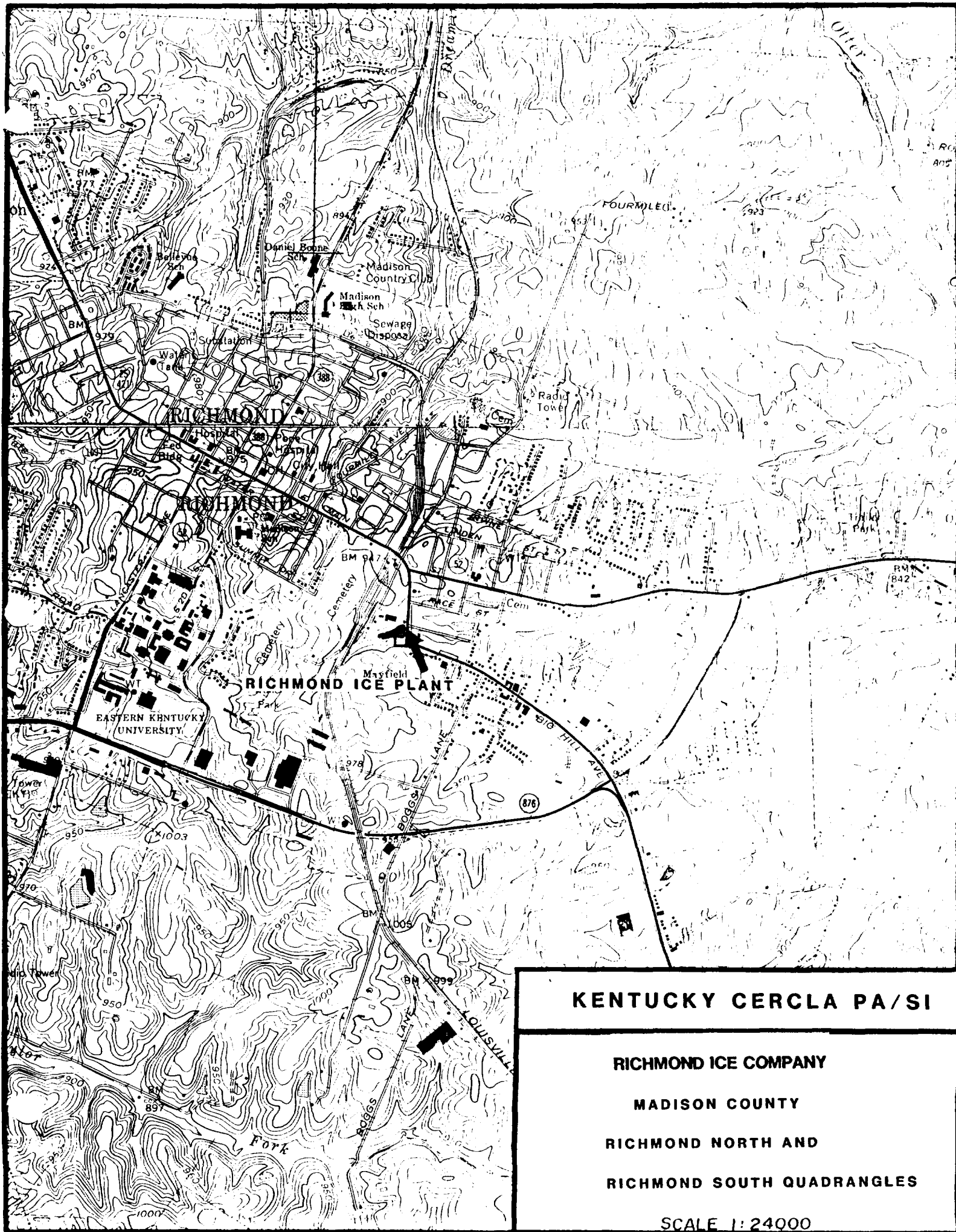


1986 EDITION
GENERAL HIGHWAY MAP
MADISON COUNTY
KENTUCKY

PREPARED BY THE
KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
DIVISION OF PLANNING
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

0 1 2 3 4 5 6 7 8 9 10 MILES





KENTUCKY CERCLA PA/SI

RICHMOND ICE COMPANY

MADISON COUNTY

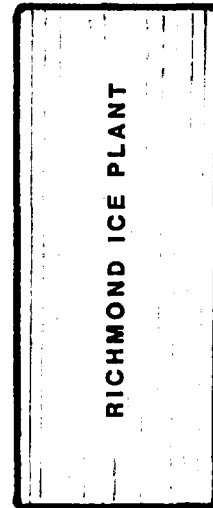
RICHMOND NORTH AND

RICHMOND SOUTH QUADRANGLES

SCALE 1:24000



**OLD
LAKE AREA**



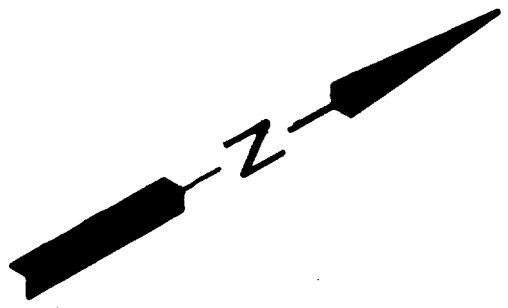
RICHMOND ICE PLANT



BUILDING

HEATH STREET

BIG HILL AVE



KENTUCKY CERCLA PA/SI

RICHMOND ICE COMPANY

MADISON COUNTY

NOT TO SCALE



M E M O R A N D U M

April 4, 1973

4.1

TO: Jerry Hurst, Director
Field Program
Division of Solid Waste

FROM: Theodore F. Gibson, P. H. Rep. II.
Training Program
Division of Solid Waste

SUBJECT: Investigation of Complaint at Richmond Ice Plant

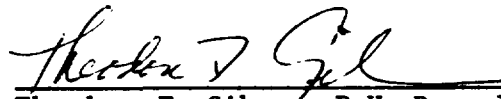
On April 3, 1973, Mr. Larry Campbell, Madison County Sanitarian, and I went to the Richmond Ice Plant to investigate a report that pollutants were being dumped into a small lake in an effort to fill it.

This is definitely the case. Part of the lake's bank was black where the oil had settled and there was a small oil slick near the bank. Part of the bank was still wet from some sort of slimy substance that had been dumped into the water.

We spoke to Mr. Ben Robinson, owner of the Richmond Ice Plant, and he stated that dirt and broken up concrete were being placed in the lake with his permission, but the oil and other refuse was not.

This lake appears to be fed by a small stream and I do not see how it can be filled completely. Mr. Robinson spoke of installing some piping to allow the stream to flow, but he seemed insistent that the filling operation would continue.

I recommend that if this lake is to be filled, only dirt be used, and use of all other materials be stopped.


Theodore F. Gibson, P.H. Rep. II.
Training Program

TFG:lw

cc: Mr. Ben Robinson
c/o Richmond Ice Plant

Madison County Health Dept.

Water Pollution

MEMORANDUM

May 10, 1978

TO: Ross Singleton, Area Supervisor
FROM: Marsha Denton, PHR II *md*
SUBJECT: Madison County #076.01D, Richmond Ice Company

On April 25, 1978, Lloyd Funkhouser and I inspected the above named dump in Richmond, Kentucky. It is located behind the Richmond Ice Company at Big Hill and Heath Streets.

The dump had been graded recently and covered. But the perimeters of the dump need a lot of work. Also new dumping had begun at the front of the dump.

We talked to Mr. Ben Robinson, the owner. He said he had been filling in for six years, that the dump used to be a pond from which the company got the ice they sold. I told him he was in violation of the law and gave him a permit application.

MD:mg

cc: Jim Denton
Madison County Health Dept.

Eugene F. Mooney
XXXXXXXXXXXX
SECRETARY



JULIAN M. CARROLL
GOVERNOR

COMMONWEALTH OF KENTUCKY
DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PROTECTION
JOHN A. ROTH
COMMISSIONER
FRANKFORT, KENTUCKY 40601
May 9, 1978

Mr. Ben Robinson
Richmond Ice Company
Heath Street
Richmond, Kentucky 40475

Dear Mr. Robinson:

On April 25, 1978, field staff from our division inspected a tract of land belonging to the Richmond Ice Company located in Richmond at Big Hill Avenue and Heath Street behind the ice company. This land is being used for disposal of construction debris, junk and household waste and appears to be in violation of the Kentucky Solid Waste Regulations.

This problem can be alleviated by either removing said waste and depositing it in a state approved landfill or by covering the waste with a minimum of two feet of soil to prevent its recurrence.

I would appreciate a written reply from you stating your intentions and a time schedule for correcting this apparent violation. Your reply should be received in this office no later than May 24, 1978. If you have any questions concerning this matter, or if this office may be of assistance, please feel free to contact me.

Sincerely,

Caroline Patrick Haight

Caroline Patrick Haight, Chief
Non-Hazardous Waste Management Section
Division of Hazardous Material & Waste
Management

CPH:MD:mg

cc: Ross Singleton, Area Supervisor
Marsha Denton, Inspector

April 18, 1973

Richmond Ice Plant
Richmond,
Kentucky 40473

Attention: Ben Robinson

Dear Sir:

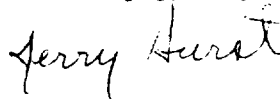
It has been brought to the attention of this office that solid waste is being disposed of on property belonging to the Richmond Ice Plant. It is further noted that this waste is being dumped into a body of water. This letter is to inform you, as property owner, that such action is in violation of the law and must cease immediately.

Enclosed is a copy of "Kentucky Solid Waste Disposal Laws and Regulations," of which you should read K.R.S. 211.707, 211.713, 211.717 and 211.992. Furthermore, certain sections of K.R.S. 433 are also being violated. Attached is a copy of these laws.

It is highly recommended that access to this area be prohibited and that permission to dump there be withdrawn. By way of copy of this letter, I am notifying the State Police and the County Sheriff's office in an effort to stop unauthorized dumping at the site.

Notify this office in writing of your intentions and schedule of correcting these violations.

Sincerely yours,



Jerry L. Hurst
Associate Sanitary Engineer
Field Program

JLH:ng

cc: Madison County Health Department
Madison County Sheriff
Ky. State Police, Post #7

May 23, 1973

Madison County Health Department
Route 3, Box 11A
Boggs Lane
Richmond, Kentucky 40475

ATTN: Dale Marcum

Dear Sir:

This letter is in reference to the application of the Richmond Ice Plant to fill in the lake just off of Big Hill Avenue.

In the application there was no mention as to what types of materials would be used to fill the lake. In your cover letter, you stated "If dirt only is gradually used to fill this lake, then it will eliminate the nuisance of odor and breeding of vectors." I agree with that statement, but there was no mention of "dirt only" being used to fill in the lake. I assume this was a verbal understanding between you and the Ice Plant.

If it is true that the intent to fill with dirt only then this office does not even require a permit. Dirt is not considered a form of solid waste and therefore, this operation would not be one of solid waste but in fact a grading operation.

However, I might add that from experience I have learned that any type of filling operation seems to attract garbage. Since the property owner is responsible for the condition of the land, the Richmond Ice Plant will have to control this operation in order to prevent any type of waste being disposed of at the site.

Again, I want to say that a permit from this office is not required if dirt is all that is to be used to fill the lake. If any other material is to be used, the application should be resubmitted along with a list of the types of materials to be disposed of.

If this office can be of any assistance, do not hesitate to contact us.

Sincerely,

Jerry Hurst

Jerry L. Hurst, Associate Sanitary Engineer
Field Program

JLH aw

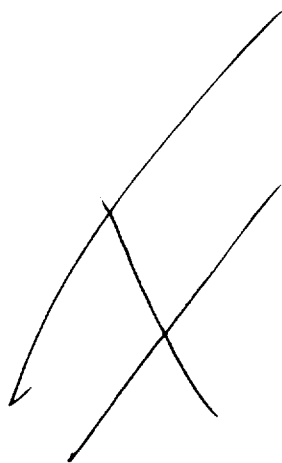
cc: Richmond Ice Company

E

UNSCANNABLE

MEDIA

(PHOTOGRAPHS)



SOURCE2

949

8:59 WEDNESDAY, JANUARY 14, 19

58

PUBLIC WATER SYSTEMS WITHDRAWING WATER FROM SURFACE SOURCES
(NOTE: AVERAGE PRODUCTION INCLUDES DEC 1985 THRU NOV 1986 DATA)

PWS ID	SYSTEM NAME:	PRIME SRCE	POPULATION	AVG PROD	DESIGN CAP	SOURCE INFORMATION: ID TYPE	SOURCE NAME	AVAIL	LAT	LONG
0750907	SACRAMENTO WATER WORKS	P	1,539	0	0 01	P	MUHLNBURG WD#3	P	0000000	0000000
COUNTY: MADISON										
0760030	BEREA COLLEGE WATER DEPARTMENT	S	10,098	1,382,636	3,000,000 01	S	COWELL LAKE	P	0373245	0841437
0762058	CLAYS FERRY CAMPGROUND	G	300	680	6,000 01	G	WELL	P	0000000	0000000
0762059	COL D J WILLIAMS PISTOL RANGE	G	25	336	. 01	G	WELL	P	.	.
0762637	DEPARTMENT OF THE ARMY	S	700	131,877	720,000 01	S	LAKE VEGA	P	0000000	0000000
0760224	KINGSTON-TERRILL WATER DIST	P	4,125	0	0 01	P	RICHMOND CITY	P	0000000	0000000
0760672	KIRKSVILLE WATER ASSOC	P	1,594	0	0 01	P	RICHMOND	P	0000000	0000000
0760285	MILFORD WATER DISTRICT	P	1,782	0	0 01	P	RICHMOND CITY	P	0000000	0000000
0760370	RICHMOND WATER/GAS/SEWER WORKS	S	16,698	4,244,994	6,000,000 01	S	KENTUCKY RIVER	P	0374705	0840600
0760407	SOUTHERN MADISON WATER DIST	P	4,623	236,773	0 01	P	BEREA WTR DEPT	P	0000000	0000000
0760441	WACO WATER DISTRICT	P	4,290	0	0 01	P	RICHMOND CITY	P	0000000	0000000



POPULATION DATA DOCUMENTATION

NAME OF SITE: Richmond Ice Plant

COUNTY: MADISON

<u>RADIUS</u>	<u>HOUSE/BUILDING COUNT</u>	<u>POPULATION</u>
$\frac{1}{4}$ Mile		
$\frac{1}{2}$ Mile	1,635	6,213
1 Mile	5,765	21,907
2 Miles	7,395	28,101
3 Miles	7,909	30,054
4 Miles	8,091	30,746

METHODOLOGY: House and building counts are taken from U.S.G.S Topographic map(s). These numbers are then multiplied by the conversion factor of 3.8 persons per household, as suggested in EPA's Uncontrolled Hazardous Waste Site Ranking System Users Manual, to obtain populations.

REFERENCES: USGS 1952, Photo revised 1979, Moberly Quadrangle 7.5 Minute Series Top. Map
 USGS 1965 " 1979, Richmond South Quadrangle " " " "
 USGS 1965, " 1979, Richmond North Quadrangle " " " "
 USGS 1952, " 1979, Union City Quadrangle " " " "

COMMENTS:

POPULATION DATA DOCUMENTATION For Groundwater usage

NAME OF SITE: Richmond Ice Plant

COUNTY: Madison

<u>RADIUS</u>	<u>HOUSE/BUILDING COUNT</u>	<u>POPULATION</u>
$\frac{1}{8}$ Mile		
$\frac{1}{4}$ Mile	0	0
1 Mile	0	0
2 Miles	13	50
3 Miles	57	217
4 Miles	79	301

METHODOLOGY: House and building counts are taken from U.S.G.S Topographic map(s). These numbers are then multiplied by the conversion factor of 3.8 persons per household, as suggested in EPA's Uncontrolled Hazardous Waste Site Ranking System Users Manual, to obtain populations.

REFERENCES: USGS 1952, Photorevised 1979, Mobility Quad, 7.5 minute Topo Map
USGS 1965, " 1979, Richmond North, " " "
USGS 1965, " 1979, Richmond South, " " "
USGS 1952, " 1979, Union City Quad, " " "

COMMENTS:

SITE DISCOVERY FORM

Part 1: Information necessary to add a site to CERCLIS

ACTION: A

EPA ID: KYD 042943217

SITE NAME: Richmond Ice Plant **SOURCE:** (R=EPA, T=STATE)

STREET: Big Hill Avenue and Heath **CONG DIST:** 05 (optional)

CITY: Richmond **ZIP:** 40475

CNTY NAME: Madison **CNTY CODE:** 151 (optional)

LATITUDE: 37° 44' / 26" **LONGITUDE:** 84° / 17' / 45" (optional)

INVENTORY IND: Y **REMEDIAL IND:** Y **REMOVAL IND:** N **FED FAC IND:** N

RPM NAME: **RPM PHONE:** (EPA Project Officer)

SITE DESCRIPTION: (optional)

POB 0X 266

Off Big Hill Avenue behind Richmond Ice Plant

Part 2: Other site information

DATE SITE FIRST

REPORTED: / / **REPORTED BY:**

REASON FOR LISTING:

Questionable fill for small lake-Inspector observed oil slick and oil on banks-

other slimy substances dumped in lake.

SITE DISCOVERY FORM

Part 1: Information necessary to add a site to CERCLIS

ACTION: A

EPA ID: _____

SITE NAME: Richmond Ice Plant SOURCE: (R=EPA, T=STATE)

STREET: Big Hill Avenue and Heath CONG DIST: 05 (optional)

CITY: Richmond ZIP: 40475 - _____

CNTY NAME: Madison CNTY CODE: 151 (optional)

LATITUDE: 37° 44' / 26" LONGITUDE: 84° / 17' / 45" (optional)

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N

RPM NAME: _____ RPM PHONE: - - (EPA Project Officer)

SITE DESCRIPTION: (optional)

Off Big Hill Avenue behind Richmond Ice Plant

Part 2: Other site information

DATE SITE FIRST

REPORTED: / / REPORTED BY: _____

REASON FOR LISTING: _____

Questionable fill for small lake-Inspector observed oil slick and oil on banks-

other slimy substances dumped in lake.